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MEMORANDUM FOR : Deputy Director, Office of Research and Reports  
FROM :  
SUBJECT : Information on Automobile Production and Sales  
in the USSR

In answer to your request by telephone of 13 March, we have gathered the following facts:

1. Three makes of automobiles are currently sold to the Soviet public. The largest, the Volga, is roughly comparable to the least expensive standard size Chevrolet of 1964 or 1965 and sells at a retail price of 5,500 rubles (more than \$6,000 at the official exchange rate). The next largest, the Moskvich, is similar in design to the early American compacts and sells at about 4,500 rubles (about \$5,000). Finally, the Zaporozhets — a very small car and similar to the baby Fiat — sells for about 1,350 rubles (\$1,500).

2. The average wage worker in Soviet industry earns about 100 rubles (111) per month. At that rate, his entire earnings for nearly five years would be required to purchase a Volga; for nearly four years to purchase a Moskvich; and for more than one year to purchase a Zaporozhets. Furthermore, there are no installment arrangements in Soviet retail outlets. Hence, the entire amount must be paid at time of purchase. By contrast, the average production worker in American factories earns nearly \$450 per month. Thus, even after allowance for taxes, the American worker can pay for a car better in quality than the top Soviet model with less than a year's salary. In addition, he can take possession with a small down payment and finance the remainder over a period of three years, or more.

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3. Nevertheless, the current market situation indicates a shortage of cars available for sale to the Soviet public in spite of those high prices and lack of installment credit. Presently, it often requires more than a year for the Soviet citizen to work his way to the top of the waiting list for purchasing a Mercury or Volga. The Zaporozhets is more readily available, but is less attractive to the Soviet public because of its small size and poor maintenance record.

4. This shortage means that the number of the Soviet elite -- writers, artists, scientists, etc. -- who have both the money and the desire to purchase private automobiles at current prices<sup>a</sup> persistently exceeds the number of such automobiles being put on the market. This is not too surprising when one notes that annual production of automobiles in the USSR is only about 2 percent of US production and that only about one-third of Soviet production is supplied to the Soviet public. The balance of production is reserved for official use and export.

US and USSR: Selected Data on Production  
and Sales of Passenger Cars  
1963-66

	USSR				US
	Production	Official Use <sup>a/</sup>	Export	Sales to Private Owners	Factory Sales Plus Net Imports
1963	173	57	36	80	7,853
1964	185	71	45	70	8,091
1965	201	89	49	64	9,660
1966	230	N.A.	N.A.	69	8,890 <sup>b/</sup>

a. Sold to Government, Party, and Military organizations.

b. Estimated by moving the 1965 datum by an index of factory production.

\* The retail price of the Volga is nearly 3 times its production costs, most of the difference explained by excise taxes (turnover taxes) levied at the retail level.

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5. The stock of cars for official and private use in 1966 indicates a ratio of 1 car for every 220 people in the USSR (compared with one car for fewer than 3 people in the US). In spite of the current emphasis on increasing automobile production, it is estimated that by 1975 if the official goals are attained, there will only be one car for every 65 people in the USSR.

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US TRADE WITH THE USSR1. Value and Commodity Composition

US trade with the USSR in 1966 was valued at \$91 million (US exports -- \$41 million; US imports -- \$50 million). This represented roughly two-tenths of one percent of total US foreign trade (\$55 billion) and about one-half of one percent of Soviet foreign trade (\$17 billion).

Since World War II, US commercial relations with the USSR have been negligible. The Export Control Act of 1949 and the Battle Act of 1951 were largely responsible for the reduction of commercial trade with the USSR after 1948. By 1952-53 exports to the USSR were almost nil (Table 1). The USSR, in retaliation against US controls and other restrictions such as the denial of MFN treatment to the USSR and the prohibition of certain fur imports from the USSR, cut off its shipments of manganese ore, chrome ore, tobacco, and other items (Table 2). Although there has been some increase since that time, US trade with the USSR still has not regained the 1948 level of \$115 million.\* While US-Soviet trade has stagnated, Soviet trade with the industrial West has increased roughly three times since 1948. In 1966 the volume of Soviet trade with the industrial West exceeded \$3 billion. The US share of this trade was thus less than 3 percent.

The US exports to the USSR inedible tallow, various chemicals, pesticides, cattle hides, synthetic fibers, and occasionally agricultural products such as wheat and rice in 1964 and soybeans in 1965 (Table 3). Machinery and equipment occupy a small share in US exports to the USSR. For example, in 1965, the USSR imported more than a half-billion dollars worth of machinery and equipment from the industrial West. The value of US-origin equipment was about \$5 million or one percent of the total (Table 4).\* West European and Japanese equipment is generally less expensive than in the US and is sold on more favorable credit terms.

\* Excluding 1964 when the US exported \$118 million in wheat to the USSR.

\*\* It has been impossible to estimate the value of US technical data which find their way to Soviet customers often by way of foreign licensees and subsidiaries. It undoubtedly runs into the millions of dollars annually and, in the view of the Department of Commerce, is becoming significant in relation to the current level of US exports of commodities to the USSR.

Major US imports from the Soviet Union are platinum group metals, furs, and chrome ore. US imports also include gem diamonds, pig iron, fish products, and other items. The value of US imports of furs from the USSR is only about one-seventh of the 1948 level; tobacco and manganese ore are no longer imported from the USSR. There have been some imports of chrome ore in recent years, although the value in 1966 was only half of the 1948 level. Platinum group metals (principally platinum, palladium and rhodium) have become the most important category of imports; about one-third of US imports of these metals originate in the USSR.

## 2. Prospects for US-Soviet Trade

There are several reasons why US trade with the USSR is at a low level. These include the unilateral export controls that the US maintains in its trade with the USSR which are more stringent than those imposed by COCOM. Another is the denial of most-favored-nation (MFN) treatment by the US to Soviet goods. This is more of a psychological barrier, however: most of the products that the USSR exports to the US are either not subject to duties or are not severely penalized vis-à-vis products from countries which are granted MFN treatment. Unavailability of credit from the US also has been a factor, as indicated above. The major reason for the relatively low level of US-Soviet trade, however, is that the commodities on which the USSR chiefly relies to earn foreign exchange in Western Europe and Japan have little or no market in the US, e.g., oil, coal, lumber, cotton, many nonferrous metals, and other products. Moreover, accommodation of some Soviet products even on a limited scale might be detrimental to traditional suppliers. Would the US, for example, import Soviet lumber at the expense of Canadian suppliers? (Table 5)

In the absence of any significant change in US economic policy toward the USSR, the prospects are that growth in this trade will continue to be slow. There are no new Soviet export commodities of major interest to the US on the horizon. Moreover, there seems to be little possibility for any significant expansion in the volume of Soviet exports of the type currently sold to the USSR.

If the US were to reduce its unilateral export controls to the COCOM level, provide MFN treatment to Soviet goods, and furnish credit on generally the same terms as do Western Europe and Japan, there could be an increase in US-Soviet trade beyond that which is now probable. Expansion of this trade would continue to be limited, however, by the inability of the USSR to earn substantial additional foreign exchange in US markets. The granting of US credits to the USSR would not solve this problem but would only postpone it. The foreign exchange

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surpluses which the USSR earns in trade with Western Europe could be used to finance likely deficits with the US but Western European countries probably would resist a persistent deficit in their trade with the USSR to finance US exports to the Soviet Union.

In summary, it is highly unlikely that removal of present restrictions on trade with the USSR will generate a substantial growth in Soviet-US trade. Until the USSR is able to offer a wide variety of high quality goods which are competitive with Western products, Soviet trade with the US will remain a small part of both Soviet and US foreign trade.

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Table 1

US Trade with the USSR  
1948-66 a/

Million US Dollars

<u>Year</u>	<u>Exports</u>	<u>Imports</u>	<u>Turnover</u>
1948	28.0	86.8	114.8
1950	0.8	38.3	39.2
1952	Negl.	16.8	16.8
1953	Negl.	10.8	10.8
1954	0.2	11.9	12.1
1955	0.3	17.1	17.4
1958	3.4	17.5	20.9
1959	7.4	28.6	36.0
1960	39.3	22.6	61.9
1961	45.6	23.2	68.8
1962	20.2	21.2	41.4
1963	22.9	16.1	39.0
1964	153.8 b/	20.8	174.6 b/
1965	44.4	42.6	87.0
1966	40.6	49.6	90.2

a. Based on US statistics.

b. Includes \$7.4 million in wheat shipped from Canadian ports but not included in official US statistics.

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Table 2

US Imports from the USSR  
Selected Years, 1948-65 and 11 Months 1966 a/

	Million \$ US						
	<u>1948</u>	<u>1951</u>	<u>1955</u>	<u>1958</u>	<u>1963</u>	<u>1965</u>	<u>Jan-Nov 1966</u>
Total imports b/	<u>86.8</u>	<u>32.2</u>	<u>16.9</u>	<u>17.3</u>	<u>21.2</u>	<u>42.6</u>	<u>44.8</u>
Furs, undressed	40.7	22.5	7.9	6.3	6.8	6.3	6.0
Tobacco	2.1	5.3	--	--	--	--	--
Cotton linters	2.5	1.4	1.3	0.6	0.5	1.2	1.3
Manganese ore	8.2	--	--	--	--	--	--
Chrome ore	14.0	--	--	--	3.5	4.4	5.8
Platinum group metals	1.8	0.3	1.1	2.6	8.1	23.1	17.1
Other c/	17.6 d/	2.7	6.5	7.8	2.4	7.6	14.5

a. Based on official US statistics.

b. Because of rounding, components may not add to the totals shown.

c. Numerous items of small value.

d. Lend lease vessels returned valued at \$7.9 million.

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Table 3

Commodity Composition of US Trade with the USSR  
1964, 1965 and January-November 1966 a/

Million US Dollars

	1964		1965		Jan-Nov 1966	
	Exports	Imports	Exports	Imports	Exports	Imports
Total b/	<u>153.8</u> c/	<u>20.7</u>	<u>44.4</u>	<u>42.7</u>	<u>38.4</u>	<u>44.8</u>
Food, beverages, tobacco	<u>125.2</u> c/	<u>0.2</u>	Negl.	<u>0.6</u>	<u>0.1</u>	<u>0.7</u>
Wheat	<u>117.8</u> c/	--	--	--	--	--
Crude materials	<u>6.3</u>	<u>12.3</u>	<u>15.9</u>	<u>13.9</u>	<u>22.0</u>	<u>15.3</u>
Hides, skins, and furskins	<u>3.0</u>	<u>5.9</u>	<u>6.2</u>	<u>6.3</u>	<u>15.3</u>	<u>6.0</u>
Soybeans	--	--	<u>6.4</u>	--	--	--
Coke	<u>0.3</u>	--	--	--	--	--
Tallow	<u>8.3</u>	--	<u>16.7</u>	--	<u>6.5</u>	--
Chemicals	<u>8.1</u>	<u>0.2</u>	<u>5.7</u>	<u>1.0</u>	<u>4.9</u>	<u>1.3</u>
Machinery and transport equipment	<u>5.0</u>	Negl.	<u>5.2</u>	Negl.	<u>3.8</u>	Negl.
Manufactured goods	<u>0.6</u>	<u>7.7</u>	<u>0.6</u>	<u>27.0</u>	<u>0.9</u>	<u>27.3</u>
Platinum group metals	--	<u>6.1</u>	--	<u>23.0</u>	--	<u>17.1</u>
Other and unspecified	Negl.	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>	<u>0.2</u>

a. Based on official US statistics.

b. Because of rounding, components may not add to the totals shown.

c. Includes wheat shipped from a Canadian port and valued at \$7.4 million which is excluded in official US statistics.

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Table 4

USSR Imports of Machinery and Equipment  
1959-65 a/

	Million US Dollars						
	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>
Total	<u>1,351.9</u>	<u>1,675.2</u>	<u>1,734.5</u>	<u>2,245.0</u>	<u>2,466.0</u>	<u>2,664.9</u>	<u>2,687.7</u>
From Eastern Europe	1,039.9	1,208.6	1,245.2	1,623.9	1,858.5	2,024.9	2,113.7
From Industrial West	293.9	455.9	469.8	601.8	588.6	621.0	505.5
From U.S.	6.6	27.7	15.7	1.8	0.9	4.0	5.5

a. Based on Soviet statistics.

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Table 5

Major Soviet Exports to the Industrial West Compared  
with US Imports of the Same Goods  
1965 a/

<u>USSR Exports b/</u>		<u>US Imports c/ 4/</u>		Value in Million US Dollars
<u>Commodity</u>	<u>Value</u>	<u>Total</u>	<u>From USSR</u>	<u>Major US Suppliers (excluding USSR) (Value)</u>
Coal and Coke	100	15	--	Canada (13)
Oil & Oil Products	284	2,052	--	Venezuela (889); Netherlands Antilles (319); Canada (282) Saudi Arabia (105); Trinidad-Tobago (115); Iran (51); Colombia (44); Indonesia (44); Kuwait (44)
Wood	158	317	--	Canada (313)
Cotton Fiber	59	18	--	Egypt (8); Peru (7)
Cotton Linters & Waste	3	8	1	Mexico (3); India (1)
Fur Skins & Pelts	54	124	6	Canada (21); Denmark (14); Norway (13); Sweden (13); Finland (8); France (6); Argentina (5); Brazil (4)
Pig Iron	51	38	1	Canada (24)
Iron & Steel Products	28	990	--	Japan (368); Belgium (134); West Germany (102); Canada (79) France (74); UK (71)
Aluminum, (incl. scrap)	31	272	1	Canada (146); Norway (38); France (19) Belgium (16) Japan (15)
Zinc	23	44	--	Canada (25)
Nickel	14	207	--	Canada (166); Norway (38)
Lead	8	61	--	Mexico (18); Australia (14); Canada (9); Peru (8); Yugoslavia (8)

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Table 5

Major Soviet Exports to the Industrial West Compared  
with US Imports of the Same Goods  
1965 a/

(continued)

<u>USSR Exports b/</u>		<u>US Imports c/</u>		<u>Major US Suppliers (excluding USSR) (Value)</u>
<u>Commodity</u>	<u>Value</u>	<u>Total</u>	<u>From USSR</u>	
Chrome Ore	13	23	4	Rhodesia (6); South Africa (5); Philippines (5)
Manganese Ore	8	110	--	Brazil (50); Congo, L. (10); Ghana (9); Gabon (9); India (6)
Platinum group metals	n.a.	69	23	UK (28); Canada (10)

- a. Rounded to nearest million dollars  
b. Based on Soviet statistics.  
c. Based on US statistics.

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TRADE OF THE USSR AND EASTERN EUROPE  
IN ELECTRONIC EQUIPMENT

1. Electronic Equipment

The electronics industry in the USSR is by any standards a large and broad-based industry. Electronics production in Eastern Europe, while more limited in scope than in the USSR, is technologically comparable with that of the USSR in the limited areas in which it concentrates. It is a goal of these countries to achieve maximum self-sufficiency in electronics production and eventually develop a significant export capability.

The rapid rate of growth in electronics output (an annual average of 22 percent during 1958-65 in the USSR), coupled with the increased pace of technological change in the USSR and Eastern Europe, have created a number of bottlenecks. Currently these bottlenecks are in the areas of components (especially semiconductor devices), test and measuring equipment, communications equipment and digital computers. These countries have sought limited imports to offset shortages in production materials; acquire production machinery for manufacturing electronic components; satisfy immediate needs for essential services such as communications and computers, and acquire advanced materials, components, and laboratory equipment to support research and development efforts. The dollar value of electronics imports of the USSR and Eastern Europe from the industrial West, however, is small -- about \$50 million annually.

In addition to purchases of equipment, the USSR and Eastern Europe have access to Free World technology through procurement of large quantities of open technical literature, attendance at international conferences, and through scientific and technical exchanges. Dependence on these sources of information and technology has become less significant, however; Soviet and East European scientists now pursue independent lines of research and in some cases have contributed to Western technology.

In view of the rapid growth achieved by the electronics industries of the USSR and East European countries, it is difficult to argue that export controls have seriously affected quantitative output levels. The controls probably have retarded Soviet production technology in semiconductors and some other components through restrictions on the export of silicon and germanium metals and processing machinery for

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these metals, and controls over transistor and diode production lines. This, in turn, has probably contributed to Soviet lags in digital computer production levels.

## 2. Computers

Although computers are still in short supply for some uses, the USSR can satisfy its most pressing internal requirements from domestic production. With the exception of Poland and East Germany, which produce limited quantities of small data processing computers, the Eastern European countries must rely on imports to satisfy domestic demand. In the past few years the USSR has been able to export a greater number of computers to Eastern Europe -- perhaps about 50 per year.

The countries of Eastern Europe, however, appear to prefer Western computers and peripheral equipment because of the greater reliability and ease of use of these machines. In recent years the East European countries have stepped up their purchases of computers from the industrial West apparently for planning and statistical work. Together with the USSR they placed about \$25 million in orders for Western computer equipment in 1966\* (see Table). In some countries, such as Czechoslovakia, Western computers account for more than half of the stock of machines installed.

US manufactured computers occupy a very small share of Western exports of computers to the USSR and Eastern Europe. Two or three small scientific computers were licensed for export to the USSR in 1966, for example. Some licenses for assorted US peripheral equipment and components to be incorporated into computers shipped from Western Europe were also approved. The small share of the Communist computer market accounted for by the US stems from the fact that US unilateral controls are stricter than COCOM controls.

## 3. Export Controls on Computers

COCOM embargoes computers especially designed for military or strategic use, but COCOM rules permit exports of so-called general purpose computers when the individual countries of COCOM determine unilaterally that the end-use is nonstrategic.

The US embargoes high performance computers\*\* regardless of the stated end-use. Lower performance computers may be exported after close

\* In value terms, these orders are insignificant when compared with the more than \$1.3 billion in machinery and equipment orders placed by the USSR and East European countries in the West in 1966.

\*\* Performance is evaluated according to the following criteria: internal memory size in bits; memory cycle time, and bus rate.

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analysis on a case-by-case basis. Effectiveness of foreign competition and stated end-use are important considerations.

The US also can control exports of foreign-made computers embodying US-origin technology or parts.

While most of the Western computers in the USSR and Eastern Europe are undoubtedly used for civilian applications, there is a possibility that some of them are diverted -- on a full-or part-time basis -- to aid in military problem solving. The CIA has continually warned of the possibility of this type of diversion.

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USSR and Eastern Europe Orders for Computer Equipment  
from the Industrial West  
1966

Thousand \$US		
<u>Equipment</u>	<u>Supplier Country</u>	<u>Value</u>
<u>Czechoslovakia</u>		
Elliott-4130	UK	630
NCR-315	a/	1,630
ICT-1904	UK	980
EELM LEO-326	UK	1,000
EELM KDF-7	UK	100 c/
UNIVAC-III	US	245 c/
ICT-1905	UK	980 c/
Bull GAMMA-10	France	129
Bull GAMMA-10	France	122
Two FRIDEN 6010's	a/	48
Bull GAMMA-10	France	170
EELM 4-50	UK	375
Bull GAMMA-10	France	130
NCR 315	a/	1,178
Process control computer	France	205
Miscellaneous equipment, including spares	b/	1,357

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USSR and Eastern Europe Orders for Computer Equipment  
from the Industrial West  
1966

(continued)

<u>Equipment</u>	<u>Supplier Country</u>	<u>Value</u>
<u>East Germany</u>		
Analog	West Germany	18
CDC-1604	US	1,733
UNIVAC-II	US	322
ICT-1900	UK	600 c/
Miscellaneous equipment, including spares	b/	320
<u>Hungary</u>		
IBM-1440	a/	239
Two ICT-1904's	UK	840
Elliott-4130	UK	350
<u>Poland</u>		
IBM-1440	a/	343
ICT-1905	UK	600 c/
ICT-1904	UK	500 c/
Miscellaneous equipment, including spares	b/	114

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USSR and Eastern Europe Orders for Computer Equipment  
from the Industrial West  
1966

(continued)

<u>Equipment</u>	<u>Supplier Country</u>	<u>Value</u>
<u>Rumania</u>		
Two Siemens 303-P's	West Germany	180 c/
ICT-1904	UK	1,148
ARCH	UK	140
<u>Bulgaria</u>		
ICT-1905	UK	476
IBM-1404	a/	200
Bull GAMMA-10	France	98
Miscellaneous equipment, including spares	b/	3,000
<u>USSR</u>		
Bull GAMMA-10	France )	152
Bull GAMMA-55	France )	
SDS-930	US )	624
SDS-910	US )	

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USSR and Eastern Europe Orders for Computer Equipment  
from the Industrial West  
1966

(continued)

<u>Equipment</u>	<u>Supplier Country</u>	<u>Value</u>
<u>USSR (continued)</u>		
Two SDS-910's	US	574
Computers	UK	280
Miscellaneous equipment, including spares	b/	2,329

a. US designed equipment, all or part of which was produced under US license and/or by US subsidiaries or affiliates in other industrial Western countries.

b. Ordered from a number of industrial Western countries.

c. Estimated.